

Testimony Submitted to the Michigan House Energy and Technology Committee on PA 295, by Professor Barry Solomon, Director of Graduate Program in Environmental and Energy Policy, Michigan Technological University, September 17, 2013

Summary:

Michigan PA 295 is on target to meet its 2015 target in a cost-effective manner. The Michigan Legislature has a tremendous opportunity to build upon this success by expanding its renewable electricity mandate to 25% to save ratepayers more than \$8 billion, which will have a beneficial effect on the state economy, create many new jobs, and greatly lower human health and environmental costs in the state by avoiding a substantial amount of imported coal for combustion in in-state power plants.

Cost-Benefit Analysis:

I recently supervised a comprehensive cost-benefit analysis of the failed Proposal 3 in Michigan. The findings are enlightening for moving forward towards expanding the renewable electricity obligation in Michigan. Given the State's heavy reliance on imported coal to meet 55% of the State's electricity demand, significant outlays from Michigan ratepayers are leaving the state to buy coal while burdening State residents with the air pollution and human health costs from this dirtiest of the fossil fuels, especially downstate. Our cost-benefit analysis of a 25% renewable electricity standard (RES) for Michigan's electric utilities for 2025 found that:

- The *net present value* of a 25% RPS for the most likely scenario is **\$8.8 billion in net benefits**.
- The *cost* of providing the renewable electricity, including compensation costs for intermittent technologies such as wind power, is \$11.6 billion.
- The *benefits* of providing the renewable electricity for the most likely scenario, is \$20.4 billion.
- The *majority of the benefits* that would be received are from the avoided electricity generation costs due to offsetting fossil fuel generation, primarily the imported coal, at \$12.1 billion.
- *Additional benefits* can be received for human health and the environment, at \$7.4 billion, primarily from offsetting sulfur dioxide, nitrogen oxide, and carbon dioxide emissions (all regulated by the U.S. Environmental Protection Agency).
- *Further benefits* can be received by reducing other "externalities", such as avoiding the land use and water quality impacts of coal-fired electric power plants, of \$900+ million.

- I would be pleased to provide more details of our analysis upon request.